

11. *Mycetophilidae and Bibionidae (Diptera) in the Collections of the South African Museum.*—By F. W. EDWARDS, B.A., F.E.S.

(With 3 Text-figures.)

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THE material dealt with in the present paper was sent for determination by the late Dr. L. Péringuey, who kindly allowed the writer to retain duplicates (where available) for the British Museum. Although small, and not in the best preservation, the collection has proved remarkably interesting, and the results of its study lead one to hope that future collecting in the Cape Province will reveal many more new and interesting forms. The occurrence of a species of the genus *Heterotricha*, hitherto known only from Baltic Amber, is worthy of special note. The genera *Dziedzickia* and *Acrodicrania* are also recorded from Africa now for the first time.

FAMILY MYCETOPHILIDAE.

SCIARA Mg.

Sciara stigmatopleura, sp. n.

M'fongosi, Zululand (W. E. Jones); 6 ♂, 1 ♀ (cotypes).

Also the following material in the British Museum: Mossel Bay, Cape Province, ii.1922 (R. E. Turner); 5 ♀. Mlanje, Nyasaland, 21.iii.1913 (S. A. Neave); 2 ♀. Dowa District, Nyasaland (Dr. J. B. Davey); 1 ♀. Belgian Congo (R. Mayne); 1 ♀. Bende, Nigeria, 22.v.1910 (J. J. Simpson); 2 ♀. Obuasi, Ashanti, 21.vi.1917 (Dr. W. M. Graham); 1 ♀.

♀. *Head* yellowish, somewhat shining; a black spot between the ocelli, which are rather close together, in a subequilateral triangle. Eyes distinctly pubescent, touching above the antennae. Palpi blackish brown, the three segments equal in length and each a little over twice as long as broad. Antennae with the scape yellowish, flagellum black, except for the base of the first segment. First flagellar segment nearly four times as long as broad, the remaining segments subequal, each a little over twice as long as broad. *Thorax*

somewhat shining light reddish ochreous, the pleurotergites (lateral sclerites of postnotum, behind and below base of wing), with a large round dull black spot; no other thoracic markings. Mesonotal setae short, scanty and black; scutellum with about six short black marginal setae. *Abdomen* with the tergites dark brown, their apical margin narrowly pale; tergites 7 and 8 or 6-8 often paler than the rest; sternites light brown, their apical margins broadly pale. Pleural membrane ochreous. Lamellae of ovipositor black, the second segment almost round. *Legs* with the coxae and femora reddish ochreous; trochanters marked with black on the under side; tibiae brownish ochreous; tarsi blackish. Tibial spurs barely twice as long as the diameter of the tibiae. First segment of front tarsi slightly over half as long as the tibiae. Fourth tarsal segment slightly shorter than the fifth. Hind tibiae without a definite apical comb. Claws simple; empodia and pulvilli equally well developed, over half as long as the claws. *Wings* with a slight and uniform brownish tinge. Costal cell not widened. *Sc* reaching just beyond the base of *Rs*; *R1* very slightly longer than *R*; costa reaching nearly three-fourths of the distance from the tip of *Rs* to the tip of *M1*; tip of *R1* a little beyond the level of *fM*; *Rs* and *M2* ending at the same level; *Cu* half as long as the basal section of *M*. Branches of *M* and *Cu* with fine macrotrichia. Halteres dark brown, base of stem yellowish.

♂. Differs from the ♀ as follows:—Antennae not much shorter than the whole body, the flagellar segments three to four times as long as broad, and clothed with pubescence which is as long as the diameter of the segments. Vertex much more extensively dark. Mesonotum with three broad and more or less confluent blackish-brown stripes, though the scutellum and postnotum remain entirely ochreous. Hypopygium ochreous, except for the extreme tips of the claspers, which are black. Claspers very large, oval, constricted on the inner side immediately before the tip, which has a dense tuft of short black bristles facing inwards.

Length of body, 4-4.5 mm.; wing, 4-4.8 mm.

This distinctively coloured species is nearly allied to *S. flavoscutellata* Edw. (East Africa), which has the postnotum as well as the scutum black in both sexes.

Sciara capensis, sp. n.

Cape Town Museum Grounds; 1 ♂, 5 ♀, reared from larvae collected 11.vi.1914, pupated 4.vii.14, flies emerged 12.vii.14 (K. H. Barnard).

♀. *Head* of the ordinary size. Vertex somewhat shining, black,

considerably swollen. Face greyish. Ocelli equal in size, in a sub-equilateral triangle. Eyes moderately pubescent, separated by about the width of one facet; bridge four facets wide in the middle, but narrowed to a single facet in width close to the main portion of the eyes. Palpi short, black, the three visible segments practically equal in length and scarcely twice as long as broad. Antennae uniformly black, with short pale pubescence; flagellar segments all equal in length and a little over one and a half times as long as broad. *Thorax* shining black, the humeral angles, a small area round the prothoracic spiracles, the sternopleural suture and the metapleura (hypopleura) ochreous. Marginal bristles of scutum distinct, black, dorso-central and acrostichal bristles minute, only just discernible under a magnification of 80, in single irregular rows. Scutellum covered with short bristles over almost its entire surface, none of the marginal ones differentiated. Pleurae bare. *Abdomen* black, somewhat shining, with short black pubescence. Pleural membrane ochreous. Hind margins of tergites narrowly pale. Sixth and seventh segments well developed. Ovipositor black, second segment of lamellae oval. *Legs* rather stout, blackish brown, front coxae and femora somewhat lighter. Tibial spurs blackish, about twice as long as the tibial diameter and about one-third as long as the first tarsal segments. First tarsal segment on front legs one-half, on hind legs one-third as long as the tibia. Hind tibia without apical comb. Claws simple; empodia and pulvilli short. *Wings* with strong smoky tinge, cells *C* and *R1* blackish. *Sc* not quite reaching base of *Rs*. Branches of *M* and *Cu* bearing macrotrichia. *R1* ending exactly above *fM*, of the same length as *R*. Median fork as long as its faint petiole. Base of *Cu1* faint. *Cu* about half as long as the first section of *M*. *M2* ending slightly beyond the level of the tip of *Rs*. Halteres with ochreous stem and black knob.

Length of body, 4 mm. ; wing, 4 mm.

♂. Antennae as in the ♀. Hypopygium very large, almost as large as the thorax and not much shorter than the remainder of the abdomen. Side pieces dark brown, twice as long as broad. Claspers black, nearly as long and nearly as thick as the side pieces; a large median projection on the inner side bearing a few stiff bristles, tip with a dense crown of short black bristles facing inwards. Wings only about twice as long as the thorax. *R1* slightly longer than *R* and ending slightly before *fM*. Macrotrichia on *M* confined to the tips of the branches. *Cu1* with the apical half obsolete, the basal half faint.

Length of body, 2.5 mm. ; wing, 2.2 mm.

This is a rather well-marked species, on account of the unusually narrow ocular bridge, and the reduced venation of the male. Although the latter feature may not be constant, it is paralleled by *S. semialata* Edw. (England) and *S. biformis*, Lundbeck (Greenland).

Sciara barnardi, sp. n.

Hottentots Holland Mts., Caledon side, 4,000 ft., Jan. 1916 (H. K. Barnard); 2 ♀.

♀. *Head* unusually small, not more than half as broad as the thorax. Vertex dull black, very much swollen. Ocelli close together in a flattened triangle. Eyes densely hairy; the narrow portions just touching, four facets wide. Labium black, slightly more produced than usual. Palpi entirely black and rather long; the first two of the visible segments each about twice as long as broad, the third nearly four times as long as broad. Antennae entirely black; flagellar segments subequal, not quite twice as long as broad; pubescence very short. *Thorax* entirely dull black, with a slight grey shimmer in some lights, three narrow lines of intenser black on the scutum. Mesonotal bristles distinct, black; acrostichal in about two rows, dorso-central in about four rows. Scutellum with short black bristles, about six on the margin rather longer than the rest. Pleurae bare. *Abdomen* dull black, with rather long and conspicuous black pubescence. Sixth and seventh segments well developed. Terminal lamellae of ovipositor rather elongate oval. *Legs* entirely black, the coxae dusted with grey. Tibial spurs reddish, very short, hardly longer than the diameter of the tibiae. First tarsal segment on all the legs about two-fifths as long as the respective tibia. Hind tibia with a distinct black apical comb. Empodia and pulvilli well developed, not much shorter than the claws. *Wings* blackish, somewhat darker towards the anterior margin. Costal cell distinctly broadened in the middle. *Sc* fading out gradually, fairly distinct to about the middle of *R*. *R*₁ a trifle shorter than *R*, and ending almost directly above *fM*. Branches of *media* parallel, slightly shorter than the fairly distinct petiole. No macrotrichia on *M* or *Cu*. *Cu* scarcely half as long as the first section of *M*. *M*₂ ending below the tip of *Rs*. Halteres black, the extreme base of the stem lighter.

Length of body, 4.5 mm.; wing, 5.2 mm.

In some respects, notably the small head, the slightly produced labium, the widened costal cell, and the distinct hind tibial comb, this species shows a distinct approach to the South American genus

Rhynchosciara. I am unable to identify it with any of the recorded African species, several of the descriptions of which are entirely inadequate. A third specimen taken at the same place and time is rather smaller, and has the abdomen dark brown instead of black, but almost certainly belongs to the same species.

HETEROTRICHA Lw.

Heterotricha (?) *relicta*, sp. n. (fig. 1).

Montagu, Cape Province, x.1917 (E. P. Phillips); 3 ♂, 1 ♀.

♂♀. *Head* dull dark greyish, pollinose, clothed with a rather long and coarse whitish pubescence. *Eyes* large, emarginate, with a

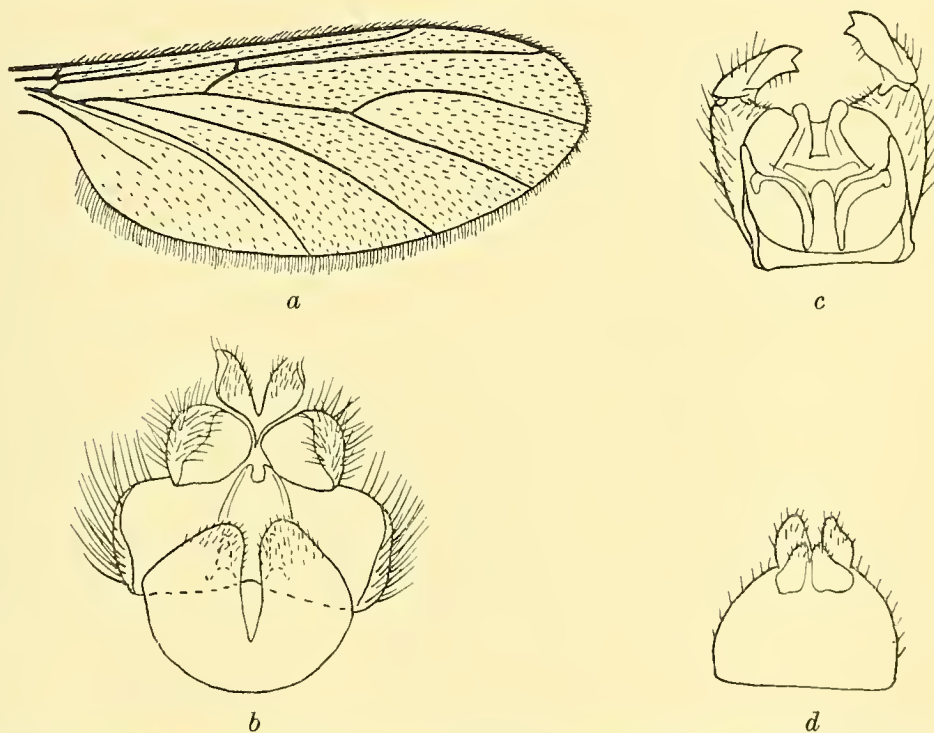


FIG. 1.—*Heterotricha relicta*, sp. n. *a*, wing; *b*, ovipositor from beneath; *c*, hypopygium from above, ninth tergite and anal segment removed and shown separately (*d*).

narrow supra-antennal portion 3–4 facets wide, the pair of narrow projections not forming a complete bridge, but separated by about the width of two facets. Ocelli equal in size, separated by nearly twice their breadth, in a very flat triangle. Palpi rather dark brownish, slender, of three distinct segments (apart from the palpiger) each segment a little over three times as long as broad, the terminal one rather longer and more slender than the others. Antennae with the scape and most of the first flagellar segment ochreous, remainder

dark brown. Flagellar pubescence dense, even, about half as long as the diameter of the segments. First flagellar segment about five times as long as broad, the succeeding segments each a little shorter than the last; penultimate about twice as long as broad, terminal rather longer, bluntly pointed. Antennae of ♀ slightly shorter than those of ♂. *Thorax* dull dark grey, heavily pollinose; mesonotum with coarse pale yellowish pubescence, mixed with some longer pale hairs and arranged in definite acrostichal, dorso-central and lateral stripes. Scutellum with similar clothing to that of the mesonotum. Pleurae bare, the sutures between the different portions scarcely indicated. Pleurotergites flat, not prominent as in most Mycetophilidae, with about ten long pale hairs. *Abdomen* blackish, paler ventrally, faintly shining, rather densely clothed with pale yellowish pubescence. Seventh and eighth segments shortened, but not retracted, the membrane separating them from the sixth and ninth quite short. Hypopygium small and inconspicuous; ninth tergite rather large and rounded; claspers simple, notched apically. Ovipositor also short and inconspicuous, turned downwards and largely hidden beneath the ninth tergite; no chitinous spermathecae. *Legs* with the coxae and femora pale ochreous, trochanters black-marked, tibiae brownish, tarsi blackish. Coxae and femora pale haired. Tibial spurs black, two to three times as long as the diameter of the tibiae; all tibiae with short setae, about half as long as the tibial diameter. Hind tibiae with a rather indefinite apical comb. First segment of front tarsi about three-fifths as long, of hind tarsi one-half as long as the respective tibia. Coxae moderately short, the front pair as long as the others. Empodia broad and almost as long as the short simple claws. *Wings* hyaline, veins all dark; venation as figured. Membrane with numerous curved macrotrichia, which are uniformly distributed over practically the whole surface, but more densely crowded just round the tip. Microtrichia very minute, only just perceptible under a magnification of 80. Halteres ochreous, knob somewhat darkened.

Length of body, 3 mm.; wing, 3.5 mm.

The genera *Heterotricha* Lw. and *Palaeoheterotricha* Meunier are both very imperfectly known, each being based on a single fossil species from Baltic Amber. Since no living representative of the group has hitherto been described, the discovery of one existing in South Africa is of no little interest. According to the information provided by Meunier, in the fossil *Heterotricha* R1 ends before the level of the base of the median fork, the costa extends far beyond the

tip of *Rs*, and *r-m* is long, whereas in *Palaeoheterotricha* the costa stops short at the tip of *Rs*, *R1* ends well beyond the level of the base of the median fork, and *r-m* is very short. In the new species *R1* is long, as in *Palaeoheterotricha*, the costa extends slightly beyond the tip of *Rs*, and *r-m* is long, as in *Heterotricha*. The living form therefore appears to be intermediate between the two fossil forms, and suggests that all three might be included within the same genus; the important character common to all three being the origin of *Cu1* from *M* instead of from *Cu2*.

Meunier referred *Heterotricha* to the Sciaridae, though Enderlein, in his later paper on the classification of this group, considered it as belonging to the Mycetophilinae. In the character of its eyes, however, as well as in the general features of its venation, the recent form certainly seems to be closer to the Sciaridae, and could not, in my opinion, be included in the Mycetophilinae. The form of the genitalia, however, especially those of the female, differs from that of most of the Sciaridae; and the vestiture of the thorax and abdomen, as well as the abbreviated costa, is reminiscent of the Lestremiinae, from which group it would be excluded by the strongly developed tibial spurs.

DZIEDZICKIA Joh.

Dziedzickia nitida, sp. n.

Cape Town, viii.1916 (R. M. Lightfoot); 1 ♀.

♀. *Head* shining black, almost bare. Ocelli in a straight line, rather more widely separated from one another than the lateral pair are from the eye-margins. Eyes very slightly emarginate above the level of the base of the antennae. Palpi short, dark brown. Antennae blackish, scape light brown. First flagellar segment slightly over twice as long as broad, second a trifle shorter, third rather shorter than the second, fourth and following segments each a little broader than long. *Thorax* shining black dorsally, pleurae ochreous brown. Mesonotum with black bristles, those at the sides rather long, those forming the usual three dorsal rows shorter. Scutellum with six bristles, rather slender and irregularly arranged. *Abdomen* ochreous brown, somewhat shining, the posterior margins of the tergites dark brown; cerci short, slender, brown. *Legs* with the coxae, trochanters and femora uniformly ochreous, tibiae brownish ochreous, tarsi dark brown; tibial spurs pale. On the front legs the first tarsal segment is about three-fifths as long as the tibia and twice as long as the second segment; the tarsi are not or only very indistinctly thickened. The

fine tibial setae not arranged in definite rows ; spines black, about as long as the diameter of the tibiae. Hind tibiae without apical comb. Empodia well developed. *Wings* with a slight and uniform brownish tinge. Venation as in *D. marginata*, except that *Rs* is slightly more curved and rather nearer to *R1*, and the base of the fork of *Cu* is only very slightly before the base of *r-m*. Halteres with pale stem and brown knob.

Length of body, 4 mm. ; wing, 4 mm.

The occurrence of this rather distinct European and North American genus in South Africa is of considerable interest. The new species is obviously closely allied to the European form, but differs in the shining head, colour of abdomen and halteres, and in the form and proportions of the front tarsal segments.

MYCOMYIA Rond.

Mycomyia (s. str.) *lightfooti*, sp. n. (fig. 2).

Oudebosch, Caledon Division, xii.1920 (R. M. Lightfoot) ; 1 ♂.

♂. *Head* blackish grey, scarcely shining, with fine dark pubescence. Palpi short, blackish. Antennae with the three basal segments brown, the remainder black. First flagellar segment a little over twice as long as broad, next five segments each about half as long again as broad, remaining eight segments from twice to three and a half times as long as broad, gradually becoming more slender towards the tip of the antenna. *Thorax* uniformly dull blackish brown dorsally, humeri and pleurae ochreous. Mesonotum with three double rows of bristles on the disc, these bristles mostly fine and short. Scutellum with only two strong bristles, which are very widely separated and placed quite near the sides on the apical margin. *Abdomen* uniformly blackish brown above, lighter below. Hypopygium with two pairs of rather elongate appendages, one very slender, slightly hairy throughout, the other broader, hairy only on the slightly expanded tips. *Legs* light brownish, trochanters, tibiae and tarsi darkened. As in all members of the genus known to the writer the fine tibial setae are arranged in conspicuously regular longitudinal rows, the hind tibiae have a distinct apical comb, and the empodia are absent. Tibial spurs black. Front legs long and slender, the first tarsal segment slightly longer than the tibia. Middle coxae with a slender, forwardly projecting curved spine, which is not quite half as long as the coxa itself. Hind coxae with a conspicuous posterior row of long bristly hairs. *Wings*

with a slight and uniform greyish tinge, devoid of markings. Venation: *Sc* ending in the costa just before the apex of the small cell, which is almost rectangular and about twice as long as broad. Stem of median fork about one-fourth shorter than the lower branch. Base of cubital fork slightly beyond base of the stem of the median fork. Anal vein reaching to middle of cubital fork. Halteres with pale stem and brown knobs.

Length of body, 4 mm. ; wing, 4 mm.

This species differs from all those at present described from Africa in its entirely unmarked wings. In this respect, and in the possession of

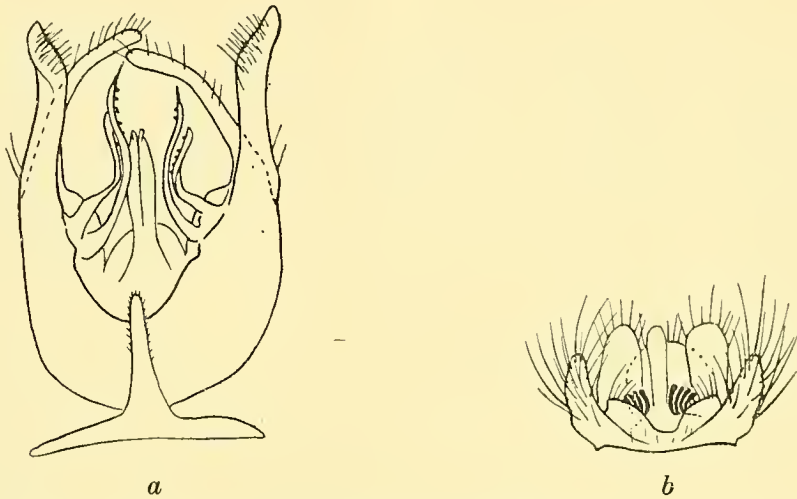


FIG. 2.—*Mycomyia lightfooti*, sp. n. *a*, hypopygium from beneath ; *b*, ninth tergite and anal segment from above.

mid-coxal spines (a secondary sexual character of the male) it resembles a large group of European species. The genus is evidently well developed in Africa, the British Museum possessing at least a dozen undescribed species.

ACRODICRANIA Skuse.

Acrodicrania africana, sp. n.

Cape Town, 1915 (L. Péringuey) ; 2 ♂, 1 ♀.

Head dark brown with black bristles. Antennae with the first three segments ochreous, the remainder blackish ; flagellar segments in both sexes approximately equal in length and about as long as broad. Palpi and the rather broad flat labella pale yellowish. Ocelli equal in size, in a straight line, the laterals almost but not quite touching the eye-margins. *Thorax* dull ochreous brown, scarcely

shining, the mesonotum with faint indications of three darker stripes; pubescence pale, bristles blackish. Scutellum with four long black bristles, the middle pair a little further from one another than from the lateral pair. Pleurotergites (lateral lobes of postnotum) with a patch of long black hair. *Abdomen* ochreous brown; tergites 2 and 3 with dark brown apical bands, broadened at the sides; tergites 4-6 almost entirely blackish brown, at least in the male. Hypopygium ochreous, the claspers densely set with short black spiny bristles. *Legs* uniformly ochreous, only the tarsi somewhat darkened; tibial spurs pale; spines black, not very regularly arranged, averaging twice the diameter of the tibiae in length. Mid tibiae with two long spines almost ventrally placed, hind tibiae with none. No hind tibial comb. Eupodium distinct, about as long as the claws. *Wings* with a slight brownish tinge, somewhat darker round the tip, and with a slight brown shade beneath the curve of *Cu2*. Venation almost exactly as figured by Skuse for *A. atricauda*, the only noticeable difference being that *Sc2* is a trifle further from the tip of *Sc1*. Halteres light ochreous.

Length of body, 3-3.5 mm.; wing, 3-3.5 mm.

This is the first African species to be discovered of this genus, which proves to have a wide distribution, species having been reported from India and South America as well as from Australia. The position of the ocelli in the Australian species is not clearly indicated by Skuse; if his expression "in a straight line on the front" means that the laterals are well removed from the eye-margins, this will constitute a rather important distinction between the Australian and African species.

LEIA Mg. (*Leiomyia* Edw.).

Leia stigmatica, sp. n. (fig. 3).

Cape Town, Sept. 1913 and 1915 (R. M. Lightfoot and L. Péringuey); 2 ♂, 3 ♀; also 1 ♂ without data.

Head mostly shining black, the face and a small area above the base of the antennae brownish ochreous. Antennae of ♀ as long as the head and thorax, basal flagellar segments about one-third longer than broad, remainder as long as broad; antennae of ♂ slightly longer than those of the ♀. Scape ochreous, flagellum blackish brown. Palpi brownish. Bristles black. Lateral ocelli narrowly separated from the eye-margins. *Thorax* light ochreous; the mesonotum with a pair of very large oval shining black patches, laterally placed on the

posterior two-thirds, somewhat approximated behind and fading out just before the scutellum, the ochreous area between them about half the width of the scutellum; some specimens also show traces of a double median brown stripe extending from the front margin of the mesonotum to about the middle. Scutellum ochreous; postnotum brownish, darker posteriorly, the prominent pleurotergites shining black. Mesonotal bristles black, those on the lateral margin very stout; in the disc are some rather long pale hairs mixed with the bristles. Scutellum with four strong black marginal bristles, almost equidistant. Pleurae ochreous, with a slight whitish shimmer in some

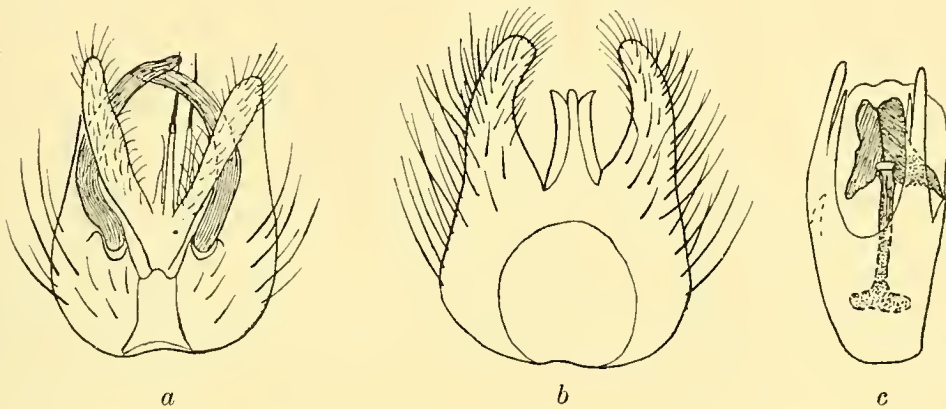


FIG. 3.—*Leia stigmatica*, sp. n. *a*, hypopygium from above; *b*, from beneath; *c*, aedeagus.

lights; subalar knob dark. *Abdomen* with tergites 1–4 mostly ochreous brown, with broad but rather ill-defined lateral blackish-brown stripes, which in some specimens tend to broaden out just before the apices of the segments and may form narrow transverse subapical dark lines. Sternites 1–4 uniformly ochreous. Segments 5 and 6 almost uniformly blackish brown; hypopygium and ovipositor ochreous. *Legs* ochreous, unmarked, only the tarsi darkened. Tibial spines black, spurs brownish. Hind tibia with a rather indefinite comb of black bristles. *Wings* with a slight uniform brownish tinge, without markings; veins dark brown; *r-m* equal to *R1* in length or very slightly longer. *Halteres* very short, pale ochreous.

Length of body, 4–5 mm.; wing, 4–5 mm.

This species is nearly allied to *L. notabilis* Edw. (British East Africa), differing in the markings of the abdomen and the unmarked hind femora. The British Museum possesses another (undescribed) species of the same group from Natal, also representatives from the Oriental and Neotropical regions.

Leia (Rhymoleia) maculicoxa (Enderlein).

East London, July 1914 (R. M. Lightfoot); 1 ♀.

The discovery of this species in South Africa, assuming it to be correctly determined, forms an interesting extension of its known range; previous records have been from the Seychelle Is. (Enderlein) and Ceylon (Brunetti and Edwards). In the Cape specimen there is no trace of a dark subapical wing fascia, and the branches of the media are rather less convergent apically than in the other specimens I have examined. It is unfortunate that a male is not available from the Cape at present; possibly the structure of the hypopygium might prove it to be distinct.

MYCETOPHILA Mg.

Mycetophila lineola Mg.

Cape Town, 1915 (L. Péringuey); 1 ♂.

This common European species has already been recorded by me from East Africa. The present specimen agrees in hypopygial structure and in all other respects with typical British examples of the species.

DELOPSIS Skuse.

Delopsis seychellensis (Enderlein).

M'fongosi, Zululand (W. E. Jones); 1 ♀.

The abdomen is lighter in colour than in Enderlein's types, but this is a variable character in several species of this group, and until a male is obtained this specimen can only be referred to *D. seychellensis*. The second abdominal segment shows the two long ventral bristles characteristic of the genus. This is the second species of the genus to be recorded from the African continent.

FAMILY BIBIONIDAE.

BIBIO Geoffr.

Bibio melanogaster Wiedemann.

Krantzkop, Natal, xi.1917 (K. H. Barnard); 2 ♂, 1 ♀.

I identify these specimens with some doubt, owing to certain small

divergences from Wiedemann's description. The pubescence is not entirely greyish, but is pale only on the under side of the head, the sides of the thorax, the whole abdomen and the front and mid femora; while it is black on the eyes of the male, the mesonotum in both sexes, the hind femora, and all the tibiae and tarsi. In the female the pronotum and scutellum are black, as well as the pleurae, but the mesonotum shows no trace of the median blackish line mentioned by Wiedemann. All the tibial spurs are reddish in both sexes, those on the hind legs being rather slender, the tips somewhat rounded. The smaller spine of the front tibiae is well developed, about half as long as the larger one.

Bibio birudis Walker.

Illovo, 14.vi.1919 (H. W. Bell-Marley); 3 ♂.

Krantzkop, Natal, xi.1917 (K. H. Barnard); 1 ♀.

♂. The males agree well with Walker's type in the British Museum, and exhibit the following characters:—Colour uniformly black, except for the usual pale brownish marks on the humeral angles, above the roots of the wings, and on each side of the scutellum. Pubescence of head, thorax and abdomen rather long, dense and black, that of the legs also all black. Hind femora moderately swollen (less so than in *B. melanogaster*), their greatest diameter rather less than the greatest diameter of the much swollen hind tibiae. Venation practically as in the allied *B. hortulanus* Linn.

♀. This sex has not hitherto been described. The specimen recorded above, which probably but not quite certainly belongs to this species, resembles *B. afer* Lw. and *B. pyrrhonotus* Speiser in having a red mesonotum and black legs, but differs from the former in its black abdomen and from both in its red pleurae. Head narrow, but not particularly elongate, shining black. Pronotum reddish brown, marked with black in the middle and at the sides. Mesonotum with fine reddish pubescence (not black as in the ♂, and in both sexes of *B. melanogaster*). Scutellum black, with short reddish pubescence. Abdominal pubescence mostly black, but mixed with some paler, especially at the sides and beneath. Coxae and tibial spurs dull reddish, the hind tibial spurs rather stouter than in *B. melanogaster*, and bluntly rounded at the tips, the inner slightly longer than the outer. Hind tibia not swollen. Wings dark brown, darker towards the anterior margin, the stigma still darker. Venation as in *B. melanogaster*.

Bibio longirostris Rondani.Syn. *B. monacanthus* Loew.

Cape Town, Sept. 1913 (G. Péringuey); 4 ♀.

There is no statement in Rondani's short diagnosis which conflicts with Loew's more detailed description, and I therefore suggest the above synonymy and adopt the earlier name. It is worthy of note that the hind tibial spurs are very broad, rounded at the tips, and equal in length; the costa is produced conspicuously beyond the tip of *Rs*, much more so than in the *hortulanus* group.

Bibio lightfooti, sp. n.

Kraaifontein, Cape Province (R. M. Lightfoot); 4 ♂, 2 ♀.

♂. Uniformly shining black, except for the reddish tibial spurs and the yellow halteres. Pubescence of eyes black, of thorax, abdomen and legs uniformly whitish; moderately long but not very conspicuous. Rostrum scarcely produced beyond the lower margin of the eyes. Femora somewhat swollen, especially the front pair. Tibiae all slender, the front pair with only one distinct spine. Spurs of hind tibiae equal in length, slender, the tips somewhat rounded. Hind tarsi slender, the first segment about half as long again as the second. Wings milk white; anterior veins brown; stigma pale brown; posterior veins milky. Venation: costa reaching considerably beyond the tip of *Rs*; *m-cu* oblique and placed well beyond the fork of *M*. Hypopygium very small.

♀. Head shining black, scarcely longer than broad, the rostrum and labium together being shorter than the eyes; ocellar tubercle prominent and close to the neck. Eyes distinctly hairy. Pronotum black in the middle, its sides and also the proepimera ochreous. Mesonotum with short pale pubescence, shining black, the sides rather broadly yellow. Scutellum black; postnotum blackish brown. Pleurae ochreous; mesosternum black. Abdomen blackish brown above, pale beneath, with short pale pubescence. Legs bright ochreous; femora darkened at the tips on the upper surface; mid and hind tibiae with rather narrow black apical rings; tarsi black except on the basal half of the first segment. Hind tibial spurs broader than in the ♂. Wings as in the ♂. Halteres pale yellow.

Length of body, 3-4.5 mm.; wing, 4.5 mm.

Apparently nearly allied to *B. breviceps* Lw., differing in the faint stigma and the light-coloured legs of the ♀.

Bibio turneri, sp. n.

Mossel Bay, Cape Province, vi.1921 (R. E. Turner); type ♀ in the British Museum.

Cape Town, ix.1913 (R. M. Lightfoot); paratype ♀ in the South African Museum.

♀. Differs from *B. lightfooti* as follows:—Head longer, almost twice as long as its greatest breadth across the eyes, the increase in length being chiefly in the basal part. Ocellar tubercle less prominent and distinctly removed from the neck. Eyes less conspicuously hairy. Pleurae darker. Hind femora dark above for quite half their length. Stigma rather dark brown and quite conspicuous, especially in the type.

In spite of the conspicuous difference in the shape of the head, I am not altogether satisfied that this is not a mere variety of *B. lightfooti*, and it is indeed possible that both may be forms of *B. breviceps*. Further collecting will solve the problem.

PLECIA Wied.

Plecia ruficollis Fabr.

M'fongosi, Zululand (W. E. Jones); 2 ♂, 2 ♀.

DILOPHUS Mg.

Dilophus capensis, sp. n.

Cape Town, on bones of whale skeleton oozing with oil; 8 ♂ (cotypes).

Cape Town, 1913 (G. Péringuey); 1 ♂.

Stellenbosch, 1919 (R. M. Lightfoot); 1 ♀.

Camps Bay, Cape Peninsula, ix.1920 (R. E. Turner); 2 ♀ in the British Museum.

♂. Body and legs entirely shining black, with rather scanty whitish hair. Eyes rather scantily hairy. Labium slender, when fully extended longer than the head. Front tibiae with a rather irregular and oblique row of four spines slightly beyond the middle; eight or nine apical spines. Hind tibiae and tarsi slender, the first tarsal segment nearly twice as long as the second. Wings milk white, stigma conspicuous and dark brown, costal cell also slightly darkened. Anterior veins dark brown, posterior veins milk white. Venation as in *D. febrilis*. Halteres with brownish stem and black knob.

♀. Head shining black, nearly twice as long as its greatest breadth, the rostrum (excluding the labium) about as long as the bare eyes. Ocelli well separated, not placed on a distinct tubercle. Thorax shining black, pleurae blackish brown, propleurae and sides of pronotum conspicuously orange. Abdomen shining blackish. Legs with the coxae and femora orange, trochanters and tibiae brownish orange, tarsi almost black. Front coxae extremely large, both longer and stouter than the femora. Front tibiae with the four spines placed slightly before the middle of the tibia, larger and stouter than those of the male, and also more regularly and less obliquely placed. Wings with the stigma larger and darker than in the male, the membrane on the basal two-thirds slightly clouded with brown. Venation and halteres as in the male.

Length of body, 4-4.5 mm. ; wing, 3.5-4 mm.

Allied to the European *D. albipennis* Mg. and the East African *D. disagra* Speiser.